



MISSOURI DEPARTMENT OF HEALTH AND SENIOR SERVICES
ONSITE SEWAGE PROGRAM
REGISTERED OWTS PROFESSIONALS CEU EXERCISE

OWTS Management Tools - Questionnaire #111

September 2008
Available for a limited time

For Continuing Education Unit (CEU) credit, read the linked documents, complete the following questionnaire and return the completed questionnaire by either mailing to DHSS, Onsite Sewage Program, P.O. Box 570, Jefferson City, MO 65102, or faxing to 573-526-7377.	CEU	Installer	Inspector	OSE	Perc Tester
Control Panels, (PDF 5 pp, 735KB): http://www.epa.gov/owm/septic/pubs/septic_fs_control_panels.pdf Septic Tank Effluent Screens, (PDF 4 pp, 116KB): http://www.epa.gov/owm/septic/pubs/effluentscreens.pdf Water Meters, (PDF 3 pp, 101KB) http://septic.umn.edu/prod/groups/cfans/@pub/@cfans/@ostp/documents/asset/cfans_asset_125500.pdf Curtain Drains, (PDF 2 pp, 177 KB) www.dhss.mo.gov/Onsite/OnsiteInstallerHighWaterArticle.pdf	2.5	✓	✓	✓	✓

TOTAL POSSIBLE: 2.5 CEUs

I, _____
 Last First Middle Initial Professional ID Number(s)

have read the documents listed above and completed the following questions:

 Signature Contact Phone Number Date

Individual Sewage Treatment Systems Fact Sheet Series Water Meters

- Water meters are designed to deal with _____, which means that they _____ function properly if they are used to measure the flow of sewage.
- Clean water meters should be used to measure the water used in the house not the water used outside for lawns, gardens, washing cars, etc. If a meter can't be installed you can do what?

- What are two alternative devices that can be used to measure water usage?

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4. A pump can be used to measure water usage. Discuss the two ways that a pump could be used.
 - a. _____

 - b. _____

5. Water meters measure flow in either gallons per minute, gallons per hour, or cubic feet per second. For the three meter readings below, calculate the gallons per day of usage:
 - a. 0.264 gallons per minute _____ gallons per day
 - b. 15 gallons per hour _____ gallons per day
 - c. 0.0017 cubic feet per second _____ gallons per day

Decentralized Systems Technology Fact Sheet Control Panel

1. Briefly discuss the following components in a typical control panel:
 - a. Fuse disconnect _____

 - b. Redundant Off/Low Level Alarm Relay _____

 - c. Audible and Visual Alarm _____

2. Discuss the benefits of a programmable timer. _____

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3. What should be included in the control panel that provides instructions and information regarding the intended function of each component?

4. What are intrinsically safe control relays? _____

5. Where is it recommended that control panels be located? _____

Decentralized Systems Technology Fact Sheet
Septic Tank Effluent Screens

1. If trying to convince an owner to allow you to install an effluent screen, what one advantage would you use as the basis for your “argument”?

2. It is noted in this fact sheet that a “biomat” may develop on the effluent screen. What benefit would this have? _____

3. What two design considerations are discussed?

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4. In order to maintain the effluent screen, _____ will be required.

5. What is the flow area of an effluent screen and why is it important when selecting a screen?

High Water – (Curtain Drains)

Fill in the blanks:

1. Curtain drains maybe an option for sites where a _____ high _____
_____ limits _____ separation.

2. Separation is necessary to provide _____ flow and to enable _____
exchange, which results in effective treatment of the _____.

3. Discuss three concerns with installing the curtain drain outlet.

a) _____

b) _____

c) _____

4. Study the first diagram (3 – 10% land slope recommended), and explain what effect increased distance
from the curtain drain has on drainage of saturated soil.

5. Curtain drains can often help improve the function of onsite systems; however, when attempting to
lower the seasonal water table, remember to approach the use of drains _____, and only in areas
where they will achieve the desired result.

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Please complete and return this sheet only if you want #111 answers sent to you (after exercise is taken offline).

Email Address _____

Fax Number _____

If fax number is not available, confirm your mailing address:

Address_____

City_____ State_____ Zip_____